

Claims:

Please amend the claims as indicted below:

1. (Currently amended) A method of processing an array of electronic components comprising the steps of:

providing mounting means;

mounting unsingulated electronic components onto the mounting means;

singulating the components to physically separate them; and

testing the singulated electronic components for defects ~~whilst~~ while they are mounted on the mounting means and without removal therefrom.

2. (Currently amended) A method according to claim 1, further comprising the step of applying markings to distinguish non-defective ones of the electronic components from defective ones marking a surface of each electronic component after testing and ~~whilst it is~~ while they are still mounted on the mounting means.

3. (Original) A method according to claim 2, wherein the singulation, testing and marking steps are carried out at two or more stations.

4. (Original) A method according to claim 3, including the step of moving the electronic components at least between the testing and marking positions for testing and marking respectively.

5. (Currently amended) A method according to claim 1, which includes the step of detecting the alignments of electronic components before testing, and ~~orientating~~ orienting the array of electronic components as desired before implementing testing.

6. (Currently amended) A method according to claim 2, wherein the markings are applied surface of each electronic component is marked with a laser device which generates a laser beam, for effecting marking.

7. (Currently amended) A method according to claim 6, wherein:

the mounting means comprises a film of laser transparent tape with an adhesive on one surface;
~~wherein~~ each electronic component is mounted on the adhesive surface of the film of transparent tape; and

wherein marking is effected by passing the laser beam generated by the laser device on a surface of each electronic component attached to through the film of laser transparent tape toward the adhesive surface of the tape thereof.

8. (Currently amended) An apparatus for processing an unsingulated array of electronic components comprising:

a mounting means for mounting ^{unsingulated array of} electronic components;

a singulating device for singulating the said ^{unsingulated} array of electronic components; and

a testing device operative to test for testing each of the said singulated ^{electronic} components for defects;

whereby singulation and testing of singulated electronic components are conducted while they are mounted on the mounting means without removal therefrom.

9. (Currently amended) An apparatus according to claim 8, including an inscribing device for applying markings to distinguish defective and non-defective tested ^{marking} ~~marking each of the~~ electronic components while they are mounted on the mounting means.

10. (Original) An apparatus according to claim 9, wherein the singulation, testing and marking are carried out at two or more stations of the apparatus.

11. (Currently amended) An apparatus according to claim 10, including moving means for moving ^{singulating} the electronic components for processing at least between the testing and marking positions.

12. (Original) An apparatus according to claim 11, wherein the moving means is adapted to move the electronic components in linear and rotary axes, such as an XYZ-Theta table.

13. (Original) An apparatus according to claim 8, wherein the mounting means comprises a film of material having an adhesive on one side and stretched on a support frame, whereby electronic components are mountable on the adhesive side.

14. (Original) An apparatus according to claim 13, wherein there is a vacuum chuck for holding in position the support frame and film on which electronic components are mountable, during the singulation, testing and marking.

15. (Currently amended) An apparatus according to claim 8, including an ~~orientating~~ orienting device to adjust alignment of electronic components and/or to locate the positions of defective components.

16. (Currently amended) An apparatus according to claim 15, wherein the ~~orientating~~ orienting device is an image recognition vision system.

17. (Original) An apparatus according to claim 9, wherein the inscribing device is a laser device which generates a laser beam to mark a surface of an electronic device by heating said surface.

18. (Currently amended) An apparatus according to claim 17, wherein:

the mounting means comprises a film of transparent tape with an adhesive surface on which electronic components are mountable; and
wherein the laser device is adapted operative to direct the laser beam generated thereby through the film toward the adhesive surface thereof to mark a surface of each electronic component that is components mounted on said adhesive surface of the transparent tape.

19. (Original) An apparatus according to claim 18, including an inverting device to invert the transparent tape to expose the surface of each electronic component that is mounted on said adhesive surface of the transparent tape to the laser device for marking.

20. (New) A method according to claim 1, wherein the electronic components comprise molded semiconductor packages.

21. (New) An apparatus according to claim 8, wherein the electronic components comprise molded semiconductor packages.

A2

any resin etc

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etc